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10/791,187	03/01/2004	Freddie W. Smith	MI40-360	3185
21567	7590	06/02/2006	EXAMINER	
WELLS ST. JOHN P.S. 601 W. FIRST AVENUE, SUITE 1300 SPOKANE, WA 99201				LEE, BENJAMIN C
			ART UNIT	PAPER NUMBER
			2612	

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/791,187	SMITH ET AL.	
	Examiner	Art Unit	
	Benjamin C. Lee	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 01 March 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-80 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-80 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/1/04</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Status

1. Claims 1-80 are pending.

Claim Objections

2. Claim 71 is objected to because of the following informalities: “claim further 54” should have read --claim 54 further--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 64 and 70 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1) In claim 64, line 2, “the power source” lacks antecedent basis.

2) In claim 70, line 2, “frequency bands” lacks antecedent basis.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 11-12, 17, 26-27, 31-34, 37, 44, 48-50, 52, 57, 59, 77-78 and 80 are rejected under 35 U.S.C. 102(b) as being anticipated by Schuermann (US pat. #5,491,484).

1) Claim 11: Schuermann discloses the claimed remote communication device (12) comprising: communication circuitry (130, 238, 244 of Fig. 3) configured to at least one of receive communication signals and generate communication signals; and an antenna (133) coupled with the communication circuitry and configured to communicate wireless signals corresponding to the communication signals including at least one of receiving wireless signals and outputting wireless signals, the antenna being configured to communicate a plurality of substantially resonant frequencies (tunable/programmable resonant frequencies by virtue of antenna 133, resonant circuit 130, and tuning/retuning network 238 controlled by latch 244 in Fig. 3, as well as FM using switch 200 connecting/disconnecting tuning capacitor 198 into/out of circuit with resonant circuit 130, whereby it is noted that some of the numerical labels in Fig. 3 are erroneous while those from col. 4, line 58 to col. 5, line 52 explaining Fig. 3 are correct.)

2) Claim 12: Schuermann discloses the claimed remote communication device according to claim 11, including the claimed wherein the antenna is substantially tuned to the resonant frequencies Fig. 3 and corresponding disclosure.

3) Claim 17: Schuermann discloses the claimed remote communication device according to claim 11, including the claimed RFID circuitry (Fig. 3).

4) Regarding claims 26-27, Schuermann met all of the claimed subject matter as in the consideration of claims 12 and 17.

5) Regarding claims 31, 34 and 37, Schuermann met all of the claimed subject matter as in the consideration of claim 26.

6) Regarding claims 32-33, Schuermann met all of the claimed subject matter as in claim 31, plus the consideration of claim 27.

7) Regarding claim 44, Schuermann met all of the claimed subject matter as in the consideration of claim 11.

8) Claims 48-49: Schuermann met all of the claimed subject matter as in claim 44, including: the claimed processing wireless signals using the remote communication device and said providing comprises providing an RFID device (Fig. 3 and consideration of claim 17).

9) Regarding claims 50 and 52, Schuermann met all of the claimed subject matter as in the consideration of claim 26, plus see Abstract and disclosure corresponding to Fig. 3.

10) Regarding claim 53, Schuermann met all of the claimed subject matter as in claim 50, plus see Abstract and disclosure corresponding to Fig. 3 in which the receiving and transmitting use the same carrier frequencies.

11) Regarding claim 57, Schuermann met all of the claimed subject matter as in the consideration of claim 11.

12) Claim 59: Schuermann met all of the claimed subject matter as in claim 57, plus the consideration of claim 17.

13) Regarding claim 77, Schuermann met all of the claimed subject matter as in claim 26 including:

--the claimed different carrier frequencies of the communication signals (frequencies of Schuermann are for modulation, and therefore constitutes carrier frequencies.)

14) Regarding claim 78, Schuermann met all of the claimed subject matter as in claim 31, including:

--the claimed different carrier frequencies of the forward and return signals (frequencies of Schuermann are for modulation, and therefore constitutes carrier frequencies.)

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15) Regarding claim 80, Schuermann met all of the claimed subject matter as in claim 44, including:

--the claimed different carrier frequencies (frequencies of Schuermann are for modulation, and therefore constitutes carrier frequencies.)

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 8, 38, 42-43, 73 and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuermann.

1) Regarding claim 1, Schuermann met all of the claimed subject matter as in the consideration of claim 11, except: specifying that the first and second different resonant frequencies are the claimed first and second different frequency bands.

However, since each of the resonant circuits associated with the resonant frequencies in Schuermann (Fig. 3) is conventionally imprecise, i.e. it would resonate at a narrow frequency band centered at the desired respective first or second corresponding frequency, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention that the antenna 133 of Schuermann is substantially tuned to first and second different frequency bands in actuality.

2) Claim 8: Schuermann renders obvious all of the claimed subject matter as in claim 1, plus the consideration of claim 17.

3) Claim 38: Schuermann renders obvious all of the claimed subject matter as in the consideration of claim 1.

4) Claims 42-43: Schuermann renders obvious all of the claimed subject matter as in claim 38, including: the claimed processing wireless signals using the remote communication device and said providing comprises providing an RFID device (Fig. 3 and consideration of claim 8).

5) Claim 73: Schuermann renders obvious all of the claimed subject matter as in claim 1.

6) Claim 79: Schuermann renders obvious all of the claimed subject matter as in claim 38, wherein the frequencies/bands do not overlap.

9. Claims 2-3, 13, 18, 39 and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuermann in view of Murakami (US pat. #5,512,910).

1) Regarding claim 13, Schuermann met all of the claimed subject matter as in claim 11, except: the claimed wherein the antenna is configured to electromagnetically communicate with a return loss of less than or equal to approximately -9 dB at the first and second frequencies.

While Schuermann discloses a transponder communicating Frequency Modulation signals back to the interrogator using multiple antenna resonant frequencies (via switch 200) in Fig. 3), Murakami discloses using an antenna (microstrip/patch antenna according to Figs. 1a-1b) having multiple resonant frequencies (f₁, f₂, f₃) with corresponding return losses of about – 10dB, -15 dB, -10 dB, respectively (Fig. 6); which meets the claimed limitation.

In view of the teachings of Schuermann and Murakami, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to use the known low return loss antenna method of Murakami for implementing the antenna function in a transponder such

as taught by Schuermann, since low return loss is generally desired for an antenna in a communication device for optimal signal, range, or power considerations, especially for a low/limited power type transponder such as taught by Schuermann.

2) Regarding claims 2-3, Schuermann render obvious all of the claimed subject matter as in claim 1, plus the consideration of claim 13 in view of Murakami.

3) Regarding claim 18, Schuermann and Murakami render obvious all of the claimed subject matter as in the consideration of claims 13 and 17.

4) Claim 39: Schuermann renders obvious all of the claimed subject matter as in claim 38, plus the consideration of claim 3 (or 13) in view of Murakami.

5) Claim 45: Schuermann met all of the claimed subject matter as in claim 44, plus the consideration of claim 13 in view of Murakami.

6) Regarding claim 75, Schuermann and Murakami render obvious all of the claimed subject matter as in claim 18, including:

--the claimed different carrier frequencies of the communication signals (frequencies of Schuermann are for modulation, and therefore constitutes carrier frequencies.)

10. Claims 5-6, 14-15, 22, 24, 28-29, 40-41, 60 and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuermann in view of Shober et al. (US pat. #6,184,841)

1) Regarding claim 14, Schuermann met all of the claimed subject matter as in claim 11, except: the claimed wherein the antenna is configured to receive the wireless signals, and further comprising another antenna coupled with the communication circuitry and configured to output the wireless signals at a plurality of substantially resonant frequencies.

While Schuermann discloses the use of a 2-way single antenna 133 on a transponder for acting both as a receiving antenna and a transmitting antenna, use of separate receiving and transmitting antennas in a transponder has been known as an alternative (Fig. 2 versus Fig. 1 of Shober et al.) It would have been obvious to one of ordinary skill in the art at the time of the claimed invention that a separate transmitting and receiving antennas design such as demonstrated by Shober et al. can be adopted in a transponder of Schuermann to perform the same intended communication function without unexpected results.

2) Regarding claim 15, Schuermann and Shober et al. render obvious all of the claimed subject matter as in claim 14, except: the claimed where in the another antenna is configured to communicate via backscatter modulation.

Shober et al. teaches the known implementation of the transponder transmitter using backscatter modulation in Fig. 1 using the single antenna design, while showing the 2-antennas design for the signal generator-driven transponder transmitter in Fig. 2.

However, since the single-versus-separate antenna design choice is independent of the choice of backscatter type transponder transmitter, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to implement the transponder transmitter using backscatter in Schuermann and Shober et al. for the relatively lower power consumption associated with the backscatter type transmitter as compared to the active transmitter.

3) Regarding claim 5, Schuermann render obvious all of the claimed subject matter as in claim 1, plus the consideration of claim 14 in view of Shober et al.

4) Regarding claim 6, Schuermann and Shober et al. render obvious all of the claimed subject matter as in claim 5, plus the consideration of claim 15.

5) Regarding claims 22 and 76, Schuermann and Shober et al. render obvious all of the claimed subject matter as in the consideration of claim 14.

6) Regarding claim 24, Schuermann and Shober et al. render obvious all of the claimed subject matter as in claim 22, plus the consideration of claim 15.

7) Regarding claim 28, Schuermann met all of the claimed subject matter as in claim 26, plus the consideration of claim 14 in view of Shober et al.

8) Regarding claim 29, Schuermann and Shober et al. render obvious all of the claimed subject matter as in claim 28, plus the consideration of claim 15.

9) Regarding claim 35, Schuermann met all of the claimed subject matter as in claim 34, plus the consideration of claim 28 in view of Shober et al.

10) Regarding claims 40-41, Schuermann renders obvious all of the claimed subject matter as in claim 38, plus the consideration of claim 5 in view of Shober et al.

11) Regarding claims 46-47, Schuermann met all of the claimed subject matter as in claim 44, plus the consideration of claim 14 in view of Shober et al.

12) Regarding claim 51, Schuermann met all of the claimed subject matter as in claim 50, plus the consideration of claim 28 (or 14) in view of Shober et al.

13) Regarding claim 60, Schuermann met all of the claimed subject matter as in claim 57, plus the consideration of claim 5 in view of Shober et al.

11. Claims 19-20 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuermann in view of Murakami and Shober et al.

1) Regarding claim 19, Schuermann and Murakami render obvious all of the claimed subject matter as in claim 18, plus the consideration of claim 14 further in view of Shober et al.

2) Regarding claim 20, Schuermann, Murakami and Shober et al. render obvious all of the claimed subject matter as in claim 19, plus the consideration of claim 15.

3) Regarding claim 23, Schuermann and Shober et al. render obvious all of the claimed subject matter as in claim 22, plus the consideration of claim 13 in view of Murakami.

12. Claims 4, 58 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuermann in view of MacLellan et al. (US pat. 5,649,296).

1) Regarding claim 4, Schuermann render obvious all of the claimed subject matter as in claim 1, except:

--the claimed power source coupled with the communication circuitry.

While Schuermann derives power from the interrogation signal, MacLellan et al. teaches the known use of on-board power supply 410 in a transponder (backscatter) in a known alternative. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include a power source as taught by MacLellan et al. in a transponder as taught by Schuermann to ensure power is available when needed.

2) Regarding claim 58, Schuermann met all of the claimed subject matter as in claim 57, plus the obviousness consideration of claim 4 in view of MacLellan et al.

3) Regarding claim 64, Schuermann renders obvious all of the claimed subject matter as in claim 1, plus the obviousness consideration of claim 4 in view of MacLellan et al., and:

It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to implement the resonant type transponder antenna of Schuermann and MacLellan et al. using a loop antenna, and furthermore to center the power source/battery with respect to the

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loop antenna as a matter of structural layout design for improved packaging, since the center of the loop antenna is space available for other components including the power source.

13. Claims 9-10, 16, 30 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuermann in view of Kodulkala et al. (US pat. 6,215,402).

1) Regarding claim 9, Schuermann renders obvious all of the claimed subject matter as in claim 1, except:

--specifying the claimed wherein the frequency bands are centered at approximately 915 MHz. and 2.45 GHz.

However, Kodukala et al. discloses that 915 MHz. and 2.45 GHz. are two of the frequencies conventionally known and used for RFID communication (col. 5,lines 40-67). It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to choose the frequency bands in Schuermann so that they are centered at approximately 915 MHz and 2.45 GHz. since these are frequencies used in known RFID protocols.

2) Regarding claim 16, Schuermann met all of the claimed subject matter as in claim 11, except:

--specifying the claimed wherein the antenna includes an impedance reduction conductor.

However, Kodukala et al. teaches the known use of an impedance matching method for (patch) antenna in RFID communication using an impedance matching (including reduction) conductor (Fig. 2A and col. 5,line 40 and col. 6, line 55). It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include an impedance reduction conductor in the antenna as taught by Kodukala et al. in a transponder as taught by Schuermann to match the impedance for improved performance of the RFID communications.

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3) Regarding claim 10, Schuermann render obvious all of the claimed subject matter as in claim 1, plus the consideration of claim 16 in view of Kodukala et al.

4) Regarding claim 30, Schuermann met all of the claimed subject matter as in claim 26, plus the consideration of claim 16 in view of Kodukala et al.

5) Regarding claim 61, Schuermann met all of the claimed subject matter as in claim 57, plus the consideration of claim 10 in view of Kodukala et al.

14. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schuermann in view of Murakami and Kodulkala et al.

1) Regarding claim 21, Schuermann and Murakami render obvious all of the claimed subject matter as in claim 18, plus the consideration of claim 16 further in view of Kodukala et al.

15. Claims 25 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuermann in view of Shober et al. and Kodulkala et al.

1) Regarding claim 25, Schuermann and Shober et al. render obvious all of the claimed subject matter as in claim 22, plus the consideration of claim 16 further in view of Kodulkala et al.

2) Regarding claim 36, Schuermann and Shober et al. render obvious all of the claimed subject matter as in claim 35, plus the consideration of claim 25 (or 16) further in view of Kodulkala et al.

16. Claims 54-56 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuermann in view of Shober et al. and Watkins (US pat. #6,317,027).

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1) Regarding claims 54-56, Schuermann and Shober et al. render obvious all of the claimed subject matter as in the consideration of claim 22 and Abstract of Schuermann, except: specifying the claimed wherein the forward link signal from the interrogator is at one of the plurality of frequencies.

While Schuermann teaches auto-tuning the transponder antenna to one of a plurality of frequencies for correspondence with that the interrogator's for better communication, Watkins teaches in the same art the auto-tuning of the interrogator antenna to one of a plurality of frequencies for transmission to the transponder for better communication in a similar fashion.

In view of the 3 teachings, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to combine the auto-tuning at the transponder of Schuermann and Shober et al. with the auto-tuning feature at the interrogator of Watkins to provide the combined advantage of additional ways used alternatively or simultaneously to match or tune the communication antennas of the interrogator and the transponder frequency to the optimum communication frequency in various communication-degrading situations and environments.

2) Regarding claim 62, Schuermann and Shober et al. render obvious all of the claimed subject matter as in the consideration of claim 24, plus the consideration of claims 54-56 further in view of Watkins, wherein:

--the claimed outputting a continuous wave signal... are met by the "backscatter" communication steps involved between the interrogator and the transponder.

17. Claim 74 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schuermann in view of Watkins.

1) Regarding 74 Schuermann met all of the claimed subject matter as in claim 11, plus the consideration of claim 62 in view of Watkins regarding the claimed wherein the device antenna is configured to communicate at different substantially resonant frequencies corresponding to interrogation signals having different carrier frequencies.

While Schuermann teaches auto-tuning the transponder antenna to one of a plurality of frequencies for correspondence with that the interrogator's for better communication, Watkins teaches in the same art the auto-tuning of the interrogator antenna to one of a plurality of frequencies for transmission to the transponder for better communication in a similar fashion.

In view of the 2 teachings, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to combine the auto-tuning at the transponder of Schuermann with the auto-tuning feature at the interrogator of Watkins to provide the combined advantage of additional ways used alternatively or simultaneously to match or tune the communication antennas of the interrogator and the transponder frequency to the optimum communication frequency in various communication-degrading situations and environments.

18. Claims 65, 68-69 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuermann in view of MacLellan et al. and Cook et al. (US pat. 5,320,561).

1) Regarding claim 65, Schuermann met all of the claimed subject matter as in claim 11, plus the consideration of claim 4 in view of MacLellan et al., while:

Cook et al. teaches the known loading/tuning effect of a battery on a nearby antenna and the need for taking such effect into account when regarding antenna parameters (col. 1, lines 52-55; col. 4, line 57 to col. 5, line 14).

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In view of their teachings, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to take into account the tuning/loading effect of the battery on the nearby antenna (co-located on a small area of the transponder) when providing the intended frequencies/bands in such design in Schuermann and MacLellan et al., since such tuning/loading effect has been known in the art as taught by Cook et al.

2) Regarding claim 68, Schuermann met all of the claimed subject matter as in claim 26, plus the consideration of claim 65 in view of MacLellan et al. and Cook et al.

3) Regarding claim 69, Schuermann renders obvious all of the claimed subject matter as in claim 38, plus the consideration of claim 65 in view of MacLellan et al. and Cook et al.

4) Regarding claim 72, Schuermann met all of the claimed subject matter as in claim 57, plus the consideration of claim 65 in view of MacLellan et al. and Cook et al.

19. Claim 70 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schuermann in view of Kodulkala et al., MacLellan et al. and Cook et al.

1) Regarding claim 70, Schuermann met all of the claimed subject matter as in claim 44, plus the consideration of claim 1, the consideration of claim 16 in view of Kodulkala et al., and the consideration of claim 65 in view of MacLellan et al. and Cook et al.

20. Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schuermann in view of MacLellan et al., Murakami and Cook et al.

1) Regarding claim 66, Schuermann and Murakami render obvious all of the claimed subject matter as in claim 18, plus the consideration of claim 65 further in view of Cook et al.

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21. Claim 63 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schuermann in view of MacLellan et al., Moskowitz et al. (US pat. #5,528,222) and Cook et al. (US pat. 5,320,561).

1) Regarding claim 63, Schuermann and MacLellan et al. render obvious all of the claimed subject matter as in the consideration of claims 1 and 4;

while:

a) Moskowitz et al. teaches the known placement of a battery in the center of the loop antenna for efficient packaging (Fig. 8); and

b) Cook et al. teaches the known loading/tuning effect of a battery on a nearby antenna and the need for taking such effect into account when regarding antenna parameters (col. 1, lines 52-55; col. 4, line 57 to col. 5, line 14).

In view of these teachings, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to center the battery relative to the loop antenna as taught by Moskowitz et al. in a transponder of Schuermann and MacLellan et al. for improved packaging efficiency, while taking into account the tuning/loading effect of the battery on the antenna when providing the intended frequencies/bands in such design, since such tuning/loading effect has been known in the art as taught by Cook et al.

22. Claim 67 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schuermann in view of Shober et al., MacLellan et al., Moskowitz et al. and Cook et al.

1) Regarding claim 67, Schuermann and Shober et al. render obvious all of the claimed subject matter as in claim 22, plus the consideration of 63 further in view of MacLellan et al., Moskowitz et al. and Cook et al.

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23. Claim 71 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schuermann in view of Shober et al., Watkins, MacLellan et al. and Cook et al.

1) Regarding claim 71, Schuermann, Shober et al. and Watkins render obvious all of the claimed subject matter as in claim 54, plus the consideration of claim 65 further in view of MacLellan et al. and Cook et al.

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1) US patents 5053774, 5374930, 5726630, 5491715, 5450086, 5446447, 3733608

--Similar transponders, interrogators or transceiver antennas.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin C. Lee whose telephone number is (571) 272-2963. The examiner can normally be reached on Mon -Thu 11:00Am-7:30Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Benjamin C. Lee
Primary Examiner
Art Unit 2612

B.L.